

1 **THE EMBODIMENTS OF THE INVENTION FOR WHICH AN**
2 **EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS**
3 **FOLLOWS:**
4

5 1. An anti-reversionary device adapted to a conduit having a bore
6 through which gas flow to or from an internal combustion engine, comprising:

7 an inner pipe positioned substantially concentrically and co-axially
8 within the bore of the conduit; and

9 an annular wall extending to fit between the pipe and the conduit, the
10 annular wall having a plurality of ports formed therein and about the inner pipe,
11 each port forming a passage directed radially inward and downstream and wherein
12 the inner pipe has a tubular gas inlet projecting upstream from the annular wall so
13 that

14 the annular wall separates the gas flow into a annular gas flow and a
15 central gas flow, the central gas flow being faster than the annular gas flow at the
16 tubular gas inlet, and the annular gas flow accelerates through the plurality of
17 passages for directed discharge into the central gas flow.

18
19 2. The anti-reversionary device of claim 1 wherein the conduit is
20 an intake to an internal combustion engine.

21
22 3. The anti-reversionary device of claim 1 wherein the conduit is
23 an exhaust from an internal combustion engine.

1 4. The anti-reversionary device of claim 3 wherein the anti-
2 reversionary device is fit adjacent the engine.

3

4 5. The anti-reversionary device of claim 1 wherein the passages
5 are angled radially inward at between 20 and 30 degrees.

6

7 6. The anti-reversionary device of claim 5 wherein each passage
8 is angled radially inward at about 26 degrees.

9

10 7. The anti-reversionary device of claim 6 wherein the conduit is
11 the exhaust from an internal combustion engine.

12

13 8. The anti-reversionary device of claim 7 wherein the anti-
14 reversionary device is fit adjacent the engine.

15

16 9. The anti-reversionary device of claim 1 wherein the annular
17 wall is a truncated cone which is angled downstream from the inner pipe to the
18 conduit.

19

20 10. The anti-reversionary device of claim 9 further comprising a
21 cylindrical housing adapted to fit to the bore of the conduit wherein the truncated
22 cone extends between the cylindrical housing and inner pipe.

1 11. The anti-reversionary device of claim 10 wherein the housing,
2 annular wall and inner pipe are formed as a unitary body formed of sheet material.

3

4 12. The anti-reversionary device of claim 11 wherein sheet
5 material has a wall thickness which forms the passage through the annular wall.

6

7 13. The anti-reversionary device of claim 10 wherein the passages
8 are angled radially inward at between 20 and 30 degrees.

9

10 14. The anti-reversionary device of claim 13 wherein each passage
11 is angled radially inward at about 26 degrees.

12

13 15. The anti-reversionary device of claim 14 wherein the conduit is
14 an exhaust from an internal combustion engine.

15

16 16. The anti-reversionary device of claim 15 wherein the anti-
17 reversionary device is fit adjacent the engine.

18

19 17. A conduit for directing gas flow to or from an internal
20 combustion engine comprising one or more anti-reversionary device of claim 1.

21

1 18. The conduit of claim 17 wherein the passages of each of the
2 one or more devices are angled radially inward at between 20 and 30 degrees.

3

4 19. The conduit of claim 18 wherein the annular wall of each of the
5 one or more devices is a truncated cone which is angled downstream from the inner
6 pipe to the conduit.

7

8 20. The conduit of claim 19 wherein the each passage is angled
9 radially inward at about 26 degrees.